Date: Mon, 29 Aug 94 04:30:24 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #286
To: Ham-Ant

Ham-Ant Digest Mon, 29 Aug 94 Volume 94 : Issue 286

Today's Topics:

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

Date: 28 Aug 1994 13:19:01 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!cs.utexas.edu!convex!
news.duke.edu!eff!neoucom.edu!news.ysu.edu!yfn.ysu.edu!ap451@network.ucsd.edu
Subject: 73-mag 160 meter loop on 80???
To: ham-ant@ucsd.edu

Saw the 160 meter loop design in 73 magazine for September 94.

Looks intriguing... just wondering if a similar one could be
built for 80???

Randy

--

Randy Padawer, P.O. Box 1167, Knoxville, TN 37901-1167 U.S.of A
Internet: ap451@yfn.ysu.edu   America Online: GwRepRandy
Telephone: (615) 637-7263   Ham Radio op: WA4FJF & a groovy guy.

Date: 28 Aug 1994 11:24:59 -0400
From: psinntp!JH.Org!not-for-mail@uunet.uu.net
Subject: [Q] Antenna Roof Mount
To: ham-ant@ucsd.edu

I am replacing my 17 year old Ringo Ranger with a Diamond X-50A dual band antenna.

Currently the Ringo is on a 5' "heavy duty" Radio Shack mast clamped onto the vent stack with a RS clamp designed for that purpose. There is also a medium size TV antenna on the mast, pretty close to the vent stack.

Although the TV antenna is pretty new, the mast is as old as the Ringo, and I'm gonna replace it as long as I'm up there.

My question is:

> Should I use another 5' mast or can I go for a 10 footer?
>
> The 10' mast would really clear the roof peak and give me a better patterni, I think.

I don't want to guy it. It might be important to know that I am in the outskirts of NYC near JFK Airport and that the topmost portion of the Ringo bent to about 20 degrees in some storm a while back. The Diamond seems to be much more wind resistant (rated to 135 mph, i believe) but I am more concerned with the mast or vent stack, since the Diamond seems like it should have a higher wind load.

TIA,
Steve
Soon to be a Ham again, if the FCC would get a move on...

--
%%
ss@jh.org   Steve Steinberg   Amateur Radio Callsign: _______

Date: 28 Aug 1994 00:55:01 -0400
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!swiss.ans.net!newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@network.ucsd.edu
Subject: AEA IsoLoop
To: ham-ant@ucsd.edu

In article <1994Aug23.214214.24541@lmpsbbs.comm.mot.com>,
bowers@ssd.comm.mot.com (Michael Bowers) writes:

My ISOLOOP is on the third floor inside the condo, about 50 feet away from
the rigs, near a window. I've been considering placing it on the balcony,
but haven't gotten around to it yet. Still working on the problem I have
with it getting into the smoke alarm.

Jon - KB5IAV

Date: Sun, 28 Aug 1994 09:24:23 EDT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!noc.near.net!saturn.caps.maine.edu!maine.maine.edu!jbaack31@network.ucsd.edu
Subject: apartment antennas
To: ham-ant@ucsd.edu

hello all, lets start some discussion for those like myself who live in areas
 where large outside antennas are not feesible. I have heard of some good ones
, loading up bed springs, and even slinkys. Anyone else have any good ones?

Jason N1RWY
"fighting through all the QRM"

Date: 26 Aug 1994 08:47:39 -0700
From: psinntp!gatekeeper.nsc.com!voder!apple.com!apple.com!not-for-mail@uunet.uu.net
Subject: Crossed Field Antenna Info Request
To: ham-ant@ucsd.edu

perryk@sugarloaf.ksc.nasa.gov (Keith E. Perry) writes:

>Can anyone provide me with information (or point me to a source) about Crossed
>Field Antennas (CFAs)?

F. M. Kabbary, Hately, M. C., Stewart, B. G., "Maxwell's equations and the Crossed-field Antenna," Electronics and Wireless World, March 1989.

C. B. Wells, "The cross-field antenna in practice," Electronics and Wireless World, November 1989.

Hately, M. C., F. M. Kabbary, Stewart, B. G., "CFA: working assumption?" Electronics and Wireless World, December 1990.

The last issue of Wireless World cited above also carried an advertisment by the "Hately Antenna Technology" on page 1099.

There had also been Usenet-level flamage (well, almost Usenet level :-) regarding the CFA in the published letters to the editor of the Wireless World of that era.

I have heard no more of the CFA since the last article above. If this aerial really works better than others of comparable sizes, one should have heard more of it by now. Perhaps everyone is just cautious after polywater and cold fusion. We know that electrically-small loops of comparable sizes work well (hmmm... "well" may not the the right term. "sufficiently?"), but the CFA is supposed to have much greater bandwidths (see Smith Charts in the December 1990 article).

73

Kok Chen, AA6TY kchen@apple.com
Apple Computer, Inc.

Date: Sat, 27 Aug 1994 14:19:14 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!iat.holonet.net!vectorbd!jpll@network.ucsd.edu
Subject: Design for wide band antenna - 3 to 30 MHz?
To: ham-ant@ucsd.edu

JimN0OCT (jimn0oct@aol.com) wrote:

: try a T2FD. Terminated Tilted Folded Dipole. It is not ideal, but is
: flat [response wise] from 5-25 MHz. If running qrp,so much the better.
: No antenna will be ideal here [3-30Mz}, but there are some designs out

: there that may cover most of it.

 Isn't this about what the B&W dipoles are?

Another candidate is the "Australian Dipole" which is like 130 ft long
--
~~~~~~
Jim Lill   / Vector Board BBS \
jpll@vectorbd.com   \ 716-544-1863/2645 /
wa2zkd@wb2psi.#wny.usa.na   GEnie: ZKD

Date: Thu, 25 Aug 1994 21:22:39 -0400
From: newsflash.concordia.ca!CC.UMontreal.CA!IRO.UMontreal.CA!matrox!altitude!
dino.hip.cam.org!user@uunet.uu.net
Subject: disguise 2M antennaa
To: ham-ant@ucsd.edu

In article <33c06q$2iq@news.delphi.com>, anaylor@news.delphi.com
(ANAYLOR@DELPHI.COM) wrote:

> Dows anybody know now of any 2M antennas that look like the factory AM/FM
> antennas? Also, if they can be coupled so they can also perform as AM/FM
> antennas as well as Transmitting antennas. Thanks in advance.
> 73's ANAYLOR@DELPHI.COM

Absolutely, I have used one for 4 years.   My car was a Sunbird and I used
the stock AM/FM antenna for both the 2M rig and the car radio.

What you need is a band splitter that will split the rf between the 2M rig
and your car radio. The transmission line going to the whip will need to
be replaced since you must add a tuning stub at the feedpoint to match the
antenna to 144 Mhz.   Any mobile radio shop that deals with cop cars
should have the needed hardware.   If not drop me a line.

-dino

--
+----------------------------------+--------------------------------------+
Dino Moriello (Telecom Tech)	WARNING: The Surgeon General has
Internet: dino@cam.org	determined that the Internet
Packet: VE2DM@VE2FKB	can be hazardous to your health.
+----------------------------------+   Avoid prolonged exposure.
Please E-mail all USENET replies.	--------------------------------------+
+----------------------------------+   James Bay, Quebec, CANADA
~~~~~~

Date: Thu, 25 Aug 1994 21:16:44 -0400
From: newsflash.concordia.ca!CC.UMontreal.CA!IRO.UMontreal.CA!matrox!altitude!
dino.hip.cam.org!user@uunet.uu.net
Subject: Grounding of Antenna near base or Elec Gnd?
To: ham-ant@ucsd.edu

In article <CuyE1F.1wx@world.std.com>, barnaby@world.std.com (Richard L
Barnaby) wrote:

> I am having a new radio shack built in the basement.
> (Below ground level)
> The contractor says he can drive a ground rod horizontally into the
> foundation (after drilling thru the foundation)
> Q: Should the placement be near the Electrical ground point,
> or near the base of the tower. Distance is about 20 feet
> apart or less.
>

The ground rod should be as close to the tower base as possible with a
large diameter cable like 4/0 coming from the tower base to the rod.
Ideally your rod should be at least 10 feet under ground in a vertical
plane. You should avoid any sharp bends in the ground cable as this will
increase the inductance of the ground connection. If you can place more
than one rod, then do so making sure to space them out by the same amount
as their length. I.E. is your rod is 10 feet long s, space the next rod
about 20 feet away. This will increase the area the current will be spread
to.

You must always bring all grounds to a common point. If you have more than
one ground then if you get hit then the current may flow in the ground
system and really make a mess. If you ground your shack, have a wire
going to your outdoor tower ground and use this point as your common tie
point. If you use more than one rod, then also interconnect them below
the surface.

> Q: If the rod is only 2 feet below the ground, but is horizontally
> installed 6 feet, is this satisfactory?

no.

>
> Q: If i leave 6" of the actual ground rod in the shack, and
> 8" of the rod is in the foundation, will I need to get a
> longer rod?
>

Many people will say than ground through concrete will and can cause great damage if you get hit, but there is a grounding method called the UFER ground which does specify that if you follow certain rules you may ground through ciment.

good luck, Dino d:)

--

+-----------------------------------+--------------------------------------+
Dino Moriello (Telecom Tech)	WARNING: The Surgeon General has
Internet: dino@cam.org	determined that the Internet
Packet: VE2DM@VE2FKB	can be hazardous to your health.
+----------------------------------+   Avoid prolonged exposure.
Please E-mail all USENET replies.	--------------------------------------+
+----------------------------------+   James Bay, Quebec, CANADA

Date: 29 Aug 94 01:44:11 GMT
From: news-mail-gateway@ucsd.edu
Subject: HF Mobile Noise Reduction
To: ham-ant@ucsd.edu

I'm looking for suggestions on how I could eliminate or minimize the engine ignition noise, so that I can operate HF mobile.

Last month, while on my vacation, I operated HF mobile for the first time. Even though the conditions were far from ideal, I did make a few contacts. My biggest problem was the incessant ignition noise from the engine in my van.

I'm convinced that the noise is coming in on the antenna. I think I've confirmed this by monitoring the transceiver audio with the engine running and the antenna disconnected. The audio was very quiet. There wasn't any altenator whine or ignition noise through the power side of the rig. As soon as I connected the antenna, the ignition noise appeared.

So that you know what I'm operating with, I'll describe my setup. The transceiver is a Drake TR5 (no noise blanker installed), connceted to a Drake WH7 wattmeter, which is connected to a MFJ-949C transmatch, that feeds a 40 meter Hamstick. The Hamstick is mounted on a homebrew magnetic mounting base. The mounting base magnets (4 in all) are covered in aluminum foil. I was told that this would reduce the capacitive effect of the paint on the roof of my van. The rig inside the van was grounded to a common point on the frame of the van. The van is a 1987 Chevrolet Astro.

When the engine was shut off, the setup worked very well. I'd like it to work as well with the engine running.

Thanks & 73
George

<~~~~~~>
> George Burns VE3INB / VA3INB <
< Oshawa, Ontario, Canada >
> AX25 addr: VE3INB @ VE3DAX.#SCON.ON.CAN.NOAM <
< AMPRnet: ve3inb@ve3inb.ampr.org.[44.135.89.46] >
> Send INTERNET Mail to: ve3inb@ve3rpi.ampr.org <
<____>

Date: Fri, 26 Aug 1994 19:56:00 GMT
From: ihnp4.ucsd.edu!sdd.hp.com!hp-pcd!hp-cv!reuter.cse.ogi.edu!cs.uoregon.edu!usenet.ee.pdx.edu!fastrac.llnl.gov!lll-winken.llnl.gov!quintro!rlile.glenqcy.glenayre.com!rel@network.ucsd.edu
Subject: High Gain Narrow Beam
To: ham-ant@ucsd.edu

In article <33gq4s$76t@umd5.umd.edu> jeanmarc@starfleet.umd.edu (Jean Marc Henriette) writes:
>From: jeanmarc@starfleet.umd.edu (Jean Marc Henriette)
>Subject: High Gain Narrow Beam
>Date: 25 Aug 1994 00:54:52 GMT

>I'm looking for an antenna to use for direction finding...
>the type would have a very narrow beam and exeptional gain

> the antenna type doesn't matter (parabolic.. Yagi whatever)

> which type would best suit my purpose for a PORTABLE unit @ 120 Mhz???
>Thankx!
> Jean Marc Henriette
>
Jean,

Since you have not given a number of gain or beam width, and believing that "very narrow beam" does not mean more than say 10 degrees, for an antenna at 120 MHertz to meet such a specification, it would hardly be portable.

A typical Yagi of 1 wavelength boom can provide about 10 to 12 dBd. Where 1 wavelength at 120 MHertz is 2.5 meters. You can judge if this is portable or not. A parabolic antenna to get the same aperture size (determines gain or directivity) is VERY large at this frequency.

Much more useful is the nulls in the pattern of a well designed Yagi. They can be very sharp even for a small, low number of elements.

Of particular interest in the US, is a scanned, array of dipoles or 1/4 wavelength verticles for the frequency of interest. By scanning the array,

the direction of the arriving signal can be determined by the small phase difference. Unless you need the gain for very weak signals, I would try either the Yagi null technique or the scanned array one.

Just remember, that aperture size determines gain or directivity and at 120 MHertz it is physically large for high gain or narrow beam width.

Date: 27 Aug 1994 22:04:43 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!wupost!crcnis1.unl.edu!unlinfo.unl.edu!mcduffie@network.ucsd.edu
Subject: Large horizontal loop
To: ham-ant@ucsd.edu

zardoz@ornews.intel.com (Jim Garver) writes:

>I've never tried the horizontal loop but have talked to hams using them.
>They always rave about performance and they do have good signals but they
>are close enough that its no surprise to me. A horizontal loop is a
>cloud warmer antenna shooting most of the energy straight up. A dipole
>below one wavelength is also a cloud warmer. Who's got an 80 meter dipole
>higher than 250 feet?

That's why it makes an excellent low band antenna. Most use of 160/75m is for local contacts, just what the doctor ordered. By the way, as you go up in frequency, the pattern flattens out and becomes a low angle radiator, again, just what the doctor ordered.

>As for the common mode noise theory, I don't think so. If true, a folded
>dipole should show the same results.

Same as what? Noise reduction? They do! So does the coaxial dipole, another excellent wideband, low noise antenna.

Gary

Date: 27 Aug 1994 18:26:21 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!swrinde!sdd.hp.com!col.hp.com!bobw@network.ucsd.edu
Subject: Special event station!
To: ham-ant@ucsd.edu

Andrew Naylor (anaylor@delphi.com) wrote:
: We (the NEbraska Hams) are operating a special event station at the Nebraska
: state fair in Lincoln, NE. We will be operating this week and next week as

: K0KKV. We will have special event cards and probally will be active on the low
: er part of the General portion of the 20 Meter band.. Come one, come all..
: 73's DE N0UJT

 So, like, what's that got to do with antennas?
 (Oh, right, you will be using antennas, I guess.)

Bob Witte / bobw@col.hp.com / Hewlett Packard / PMO / KB0CY / (719) 590-3230

Date: Sat, 27 Aug 1994 13:22:19 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
europa.eng.gtefsd.com!news.umbc.edu!eff!news.kei.com!ddsw1!n9csa!
jeff.smith@network.ucsd.edu
Subject: WANTED:SMALL QUAD
To: ham-ant@ucsd.edu

Hey Guys,
I live in a antenna restricted area. Does anybody have a very small quad
for HF or can build one for me. I am unable to build due to nerve
problems in my hands. Desperatly need a bigger signal on the bands.
Please help! Leave me a reply. Thanks,73's, Jeff

Date: Sat, 27 Aug 1994 21:47:54 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!library.ucla.edu!csulb.edu!csus.edu!
netcom.com!grady@network.ucsd.edu
To: ham-ant@ucsd.edu

References <33gfgi$gch@sefl.satelnet.org>, <gradyCv3qvv.6y1@netcom.com>,
<777928400snz@arkas.demon.co.uk>
Subject : Re: Lightning

Michael J Dower (Michael@arkas.demon.co.uk) wrote:
: In article <gradyCv3qvv.6y1@netcom.com> grady@netcom.com "Grady Ward" writes:

: > Get the *free* technical notes on lightning protection, proper rf
: > grounds, etc. from ICE (Industrial Communications Equipment). They
: > have wonderful arrestors (DC grounded, lifetime warranty).
: >
: > Beautifully over-designed: "can drive a truck over all of their stuff
: > and it will keep working"
: >
: > 1 800 ICE COMM

: Do you have a fax / international number for these guys?

Industrial Communication Engineers, Ltd.
P.O. Box 18495
Indianapolis, IN 46218
Hours 1500-2300 UTC
1 800 423 2666
1 317 545 5412
customer service 1 317 547 1398
24 hr FAX 1 317 545 9645
TELEX I.C.E. 27-440

Free publications include:
10 How to Conduct a noise audit of your telecommunications
11 Modern beverage receiving antenna constructions and installation
30 modern lightning protection for your tranmitting and receiving facility
-- rf entry ports
Plus another dozen or so technical and well written pages...

I bought most of their equipment over the years and I doubt you
can find better quality anywhere, unless you make it yourself.

For example: their lightning arrestor 305/U specifications:
5kwPEP 1.5-30 Mhz SO239 or N (TFE)
7 nanosec attack
50,000 amps surge current minimum
operating temp -40 to 250f
back-emf GDU 1,000-2,000V
VSWR less then 1.1:1 over rated spectrum
insertion loss .1dB
impedance 50/75 Ohms
hardware 18-8 stainless
finish natural aluminum 1/8" thick
DC-active (drains static electricity)

--
Grady Ward | For information and free samples on | "Look!"
grady@netcom.com | royalty-free Moby natural language | -- Madame Sosostris
+1 707 826 7715 | lexicons (largest in the world), | A91F2740531E6801
(voice/24hr FAX) | run: finger grady@netcom.com | 5B117D084B916B27

End of Ham-Ant Digest V94 #286
****